

## STATE OF SOUTH CAROLINA

(Caption of Case)

In the Matter of

Application of Duke Energy Carolinas, LLC for  
Approval of Decision to Incur Nuclear Generation  
Pre-Construction Costs

BEFORE THE  
PUBLIC SERVICE COMMISSION  
OF SOUTH CAROLINA

## COVER SHEET

DOCKET

NUMBER: 2007 - 440

SC PUBLIC SERVICE  
COMMISSION

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(Please type or print)

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## DOCKETING INFORMATION (Check all that apply)

☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously

☐ Other:

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)		
<input checked="" type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input type="checkbox"/> Letter	<input type="checkbox"/> Request
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certificatio
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigation
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter
<input type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response
<input type="checkbox"/> Railroad	<input type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input type="checkbox"/> Response to Discovery
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff
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<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest	
<input type="checkbox"/> Other:	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit	
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# ROBERT GUILD

*Attorney at Law*

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SC PUBLIC SERVICE  
COMMISSION

May 23, 2008

Mr. Charles Terreni  
Chief Clerk  
Public Service Commission of South Carolina  
Synergy business Park, Saluda Building  
101 Executive Center Drive  
Columbia, SC 29210

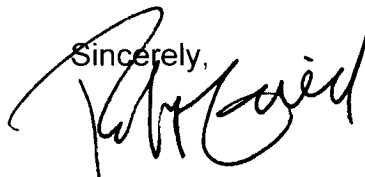
Re: Application of Duke Energy Carolinas, LLC for Approval of Decision to Incur  
Nuclear Generation Pre-Construction Costs  
Docket No. 2007-440-E

Dear Mr. Terreni:

Enclosed please find for filing and consideration the Proposed Order of Friends  
of the Earth Denying the Application of Duke Energy Carolinas, LLC,  
together with Certificate of Service reflecting service upon all parties of record.

With kind regards I am

Sincerely,



Robert Guild

Encl.s  
CC All counsel

BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA  
DOCKET NO. 2007-440-E

RECEIVED  
2008 MAY 23 PM 1:33  
SC PUBLIC SERVICE  
COMMISSION

In the Matter of	)	
	)	
Application of Duke Energy Carolinas, LLC	)	<b>PROPOSED ORDER OF FRIENDS</b>
for Approval of Decision to Incur Nuclear	)	<b>OF THE EARTH DENYING THE</b>
Generation Pre-Construction Costs	)	<b>APPLICATION OF DUKE ENERGY</b>
	)	<b>CAROLINAS, LLC</b>

This matter comes before the Public Service Commission of the South Carolina ("Commission") on the Application of Duke Energy Carolinas, LLC ("Duke"), pursuant to S.C. Code Ann. Section 58-33-225, for Approval of Decision to Incur Nuclear Generation Pre-Construction Costs. For the following reasons we conclude that such application must be denied where the Duke has failed to carry its burden of proof to establish that the decision to incur preconstruction costs related to the potential nuclear plant is prudent considering the information available to the utility at the time and considering the other alternatives available to the utility for supplying its generation needs. Further, the Application must be denied where Duke has failed to fully and accurately describe and establish the plant being considered, including the annual capacity factor of the proposed plant; the need for the generation capacity represented by the potential plant; and, the reasonableness and prudence of the potential fuel sources and potential generation types represented by the proposed plant.

Timely Petitions to Intervene were filed by Friends of the Earth ("FOE") on behalf of its members who are Duke customers and stockholders and neighbors of the proposed nuclear station; and by the SC Energy Users Committee. Without objection both parties were properly admitted as Intervenors on the basis of their members' interest in the subject matter and, thus, their legal standing to participate in this adjudication. The SC Office of Regulatory Staff participated as a party to this proceeding.

A hearing was conducted on April 17, 2008, to address preliminary discovery disputes and claims of confidentiality by Duke and a prospective vendor, Westinghouse Electric Company, LLC and Stone and Webster, Inc. ("Westinghouse/Stone"), which entered a special limited appearance in this proceeding. The Commission entered Order No. 2008-327 on April 25, 2008, Ruling on Discovery Motions and Appointing Hearing Officer. Subsequently the Hearing Officer conducted a further discovery conference and entered a Directive making additional discovery rulings. Evidentiary hearings on the merits of this Application were conducted May 6, 7 and 12, 2008, at which testimony was heard and a number of exhibits were admitted in evidence.

Having fully considered the evidence presented, the Commission makes the following findings of fact and reaches the following conclusions of law.

#### FINDINGS OF FACT

Janice D. Hager is the Managing Director, Integrated Resource Planning and Environmental Strategy for Duke, Tr., May 6, 2008, p. 97. Asked how critical the Commission's approval of this application is to this project, Ms. Hager stated that denial "would definitely be detrimental to the development, the future development." Tr., May

6, 2008, p. 115. Ms. Hager acknowledged that projections of future growth in demand for electric service “is certainly the starting point for our planning process.” Tr., May 6, 2008, p. 125. For the future period from 2006 through 2027, during which the proposed nuclear station would be constructed and placed in service, Duke assumes an annual peak demand growth of 1.6 percent. Tr., May 6, 2008, p. 125. However, most recent actual historical experience for the five year period between 2001 and 2006 has reflected an annual growth rate of only 0.6%. Duke, thus, assumes more than a doubling of the annual growth rate for the next 20 years as compared to the last 5. While Duke explains the reduced recent growth rate as “largely attributable to declines in the industrial textile class,” they don’t expect the textile industry to magically recover and return to earlier periods of growth in its service territory. Tr., May 6, 2008, p. 126. Duke assumes that greater residential and general service growth will occur in this future period as compared to the past 5 years. Tr., May 6, 2008, p. 126. Between 2005 and 2006 Duke’s electricity sales actually declined by 830 gigawatt-hours. Tr., May 6, 2008, p. 128. Duke has failed to sustain its burden of proof as to the need for the generation capacity represented by the proposed nuclear station.

Neither Ms. Hager nor any other Duke witness offered any projection of the costs of the proposed Lee nuclear station in their prefiled testimony. Tr., May 6, 2008, p. 129. Yet, Duke told the Charlotte Business Journal on May 2, 2008, that “its original cost estimate of \$5 billion to \$6 billion for the proposed nuclear power plant are out of date.” Id. Ms. Hager further acknowledges that Florida Power & Light has recently estimated in testimony to the Florida PSC that a 2,200 megawatt nuclear facility- comparable to a 2-unit Lee station- is expected to cost between \$12.1 and 17.8 billion.

Without persuasive explanation she rejects the cost comparison to the proposed Lee station. Tr., May 6, 2008, pp. 130-132. Yet, she admits that the costs of constructing a nuclear plant for Duke today are “likely to be higher” and not lower than the \$5 or \$6 billion Duke previously projected. Tr., May 6, 2008, pp. 133. In the event that Duke chooses not to build the Lee nuclear station, even after having incurred some \$230 million in pre-construction costs, it will seek to pass on those costs to ratepayers in North and South Carolina as “the only way to preserve the nuclear option for our customers.” Tr., May 6, 2008, pp. 172.

Ms. Hager has no knowledge of whether any other electric utilities have actually ordered and committed investor dollars toward constructing an AP 1000 reactor as proposed for the Lee station. Nor was she aware of recent decisions by Midamerican Nuclear Energy Company- owned in part by Warren Buffett’s Berkshire Hathaway company- to cancel its proposed Idaho nuclear plant, concluding that “it does not make economic sense.” Tr., May 6, 2008, pp. 173.

Ms. Hager’s IRP analysis assumes only a 7% outage frequency for the proposed plant due to refueling and forced outages. She is not aware of other nuclear reactors experiencing reduced reliability due to drought conditions adversely impacting water availability; nor has Duke incorporated potential impacts of climate change on drought conditions and future nuclear plant reliability. Tr., May 6, 2008, pp. 175-177.

While Ms. Hager is familiar with the work of Amory B. Lovins on the cost of energy efficiency measures, Duke has not analyzed the cost of energy efficiency measures in cents per kilowatt hour. Tr., May 6, 2008, pp. 182-183. Nor has Duke assessed the cost to ratepayers in cents per kilowatt hour of electricity from the

proposed Lee station. Tr., May 6, 2008, pp. 185. Duke did publicly project that the cost to ratepayers of “decarbonizing our generation fleet” including constructing two Lee nuclear units may be 70 to 120 % higher electric rates. Tr., May 6, 2008, pp. 189. Ms. Hager does not know if there is a cost ceiling for the proposed Lee station beyond which it would be imprudent to construct, beyond which Duke would not choose to go forward with the project. Tr., May 6, 2008, pp. 190. Yet she acknowledged: “(T)here would be a point at which we would say we don’t believe its prudent to go forward with the Lee Nuclear Station. That’s one of the reasons we’re going to go forward with the nuclear development cost, is to see if we can reach that point to make a decision to go forward.” Tr., May 6, 2008, pp. 191. Ms. Hager does not know if there is a cost of electricity from the Lee station beyond which customers will simply bypass their system and obtain their energy someplace else- beyond which Duke will simply lose customers. Tr., May 6, 2008, pp. 194.

Ellen T. Ruff is President of Duke Energy Carolinas, LLC, with overall accountability for the company’s financial results, operational performance, and customer service. Tr., May 12, 2008, p. 320. Duke, through its lobbyists, endorsed and obtained passage of the Base Load Review Act which provides for this application process. Tr., May 12, 2008, p. 335. Duke has made no final decision to actually construct the proposed Lee station. It is still in contract negotiations with prospective vendors for construction of the plant; has not finalized the integrated resource plan for the plant; and has not obtained company board approval; only after which it will seek Commission certification for plant construction. Tr., May 12, 2008, p. 336. The costs of the Lee nuclear station, the cost of alternatives, as well as other relevant facts, will be

issues that will go into the decision whether to build the Lee station. Tr., May 12, 2008, p. 336. Ms. Ruff does not know at what cost construction of the proposed Lee station would no longer be prudent since the cost of alternatives will also need to be considered in the integrated resource plan and decision-making process. Tr., May 12, 2008, p. 337. This Commission will have to decide if the proposed cost of the nuclear station is imprudent. Tr., May 12, 2008, p. 338. At this point in time Duke does not know what that cost is, but seeks this authority to keep the nuclear option open. Tr., May 12, 2008, p. 338. If the Lee project were abandoned after incurring pre-construction costs, Duke would seek Commission approval to pass such costs on to ratepayers. Tr., May 12, 2008, p. 339. Some \$70 million of such costs have already been incurred by Duke through 2007 without obtaining Commission approval. Id. If the Commission does not approve this application to incur pre-construction costs, Duke would not proceed with construction of the Lee nuclear station. Tr., May 12, 2008, p. 342.

Dhiaa M. Jamil is Duke's Group Executive and Chief Nuclear Officer, responsible for the safe and efficient operation of the company's nuclear generating stations. Tr., May 12, 2008, p. 377. Through December 2007 Duke has expended \$11,313,218 for "preconstruction and site preparation" activities in connection with the proposed Lee station. Such costs include the costs of demolition and removal of unusable structures at the proposed site. Tr., May 12, 2008, pp. 396, 399. In this category Cleveland Wrecking company's contract in the amount of \$8,439,358 is for demolition and removal of partially built structures at the site of Duke's 1980's abandoned Cherokee Nuclear Station. Tr., May 12, 2008, pp. 400, 402. Hearing Exhibit 2. Ratepayers will



be asked to pay for tearing down Duke's partially-built and abandoned nuclear plant to make way for the new proposed Lee nuclear station. Tr., May 12, 2008, p. 405. Duke has reused concrete from such demolished structures for construction of roadways and pond dams which are essential capital costs of the proposed nuclear station. Tr., May 12, 2008, p. 407. Duke includes in this application among preconstruction costs the costs associated with such essential capital equipment as reactor coolant pumps, containment vessel, reactor pressure vessel, steam generators, control rod drive mechanisms, and condensor circulating water piping Tr., May 12, 2008, p. 408. While no costs for such so-called 'long lead time procurement items' were incurred through the end of 2007, Duke seeks authority to include such costs in the preconstruction authorization to be incurred in the future. Tr., May 12, 2008, p. 409. Costs incurred in connection with the demolition and removal of unusable structures at the proposed Lee site are not reasonable or prudent; nor are costs associated with the construction or 'maintenance' of roadways or pond dams at the site properly treated as preconstruction costs. So-called "long lead time procurement items" are properly deemed capital construction items and are not properly included as preconstruction costs.

Nicholas Phillips, Jr. Is a consultant in the field of public utility regulation appearing on behalf of the Office of Regulatory Staff. Tr., May 12, 2008, p. 469. While Mr. Phillips acknowledges that the construction of the proposed Lee station will produce inevitable ratepayer 'sticker shock,' he is "not prepared to say at this point" what the extent of that 'sticker shock' will be, deferring that question until the next phase of this proceeding. Tr., May 12, 2008, pp. 493-494. Asked what, in his opinion, will be the price of electricity from the proposed Lee station, Mr. Phillips declined: "I think that most

of the information I have is stale.” Tr., May 12, 2008, p. 502. Mr. Phillips asserts that the decision as to whether the price of keeping the ‘nuclear option open’ is too high should be deferred until the next proceeding. Tr., May 12, 2008, p. 503. He has “no number in mind” above which the price of the Lee station would be so high as to be imprudent. Id.

Peter A. Bradford testified on behalf of Intervenor, Friends of the Earth (“FOE”). Mr. Bradford formerly chaired the public utility regulatory commissions in Maine (1974-5 and 1982-87) and New York (1987-95); and was also a commissioner on the U.S Nuclear Regulatory Commission (1977-82). He was a member of the National Association of Utility Regulatory Commissioners (NARUC) from 1971 until 1995 and served as its president in 1987. Mr. Bradford has taught and consulted extensively in the fields of utility regulation and nuclear power. Tr., May 7, 2008, p. 217. Hearing Exhibit 1. As Mr. Bradford testified: “Duke has not set forth basic elements necessary to a finding that incurring preconstruction costs would be prudent. I urge the Commission not to expose South Carolina customers to the very large rate impacts implicit in such a finding.”

As Bradford explained, Industry best practice is still evolving in light of the absence of recent experience. For example Exelon, which is proposing a nuclear plant in the restructured market in Texas, where it cannot assure cost recovery by persuading regulators to put all the risks on the customers, seems to be taking quite a different approach. Their approach to prudent contracting involves sharing the risks of cost increases with contractors and setting cost containment limits to protect ratepayers.

For purposes of this proceeding it is important to recognize that there is at present no way to come up with the correct model for the contracts whose conceptual prudence the Commission is being asked to approve. Without establishing that contracts containing the costs to reasonable levels can be negotiated, Duke cannot sustain its burden of proving that a decision to enter into such contracts is prudent. Tr., May 7, 2008, pp. 228-230.

The construction of new nuclear power plants employing untested designs entails extremely large economic risks for South Carolina customers. More than half of all U.S. plants receiving construction permits were cancelled, some after expenditures in the billions of dollars. Construction costs have often overrun estimates by a factor of three or more. Factors of ten have not been unusual. Tr., May 7, 2008, pp. 253.

Bradford described the extraordinary benefit being conferred on Duke Energy Carolinas in being able to obtain both an early determination of prudence and preoperational rate increases in connection with the William States Lee III Station. He explained why Duke cannot establish the prudence of its decision to incur preconstruction costs of \$230 million between now and the end of 2009 without providing reliable evidence of the likely cost of the unit and the impact of that cost on the rates to be paid by South Carolina electric customers. He discussed the ways in which seeking to assess prudence on a segmented basis as contemplated by this proceeding works to the advantage of Duke's investors and to the disadvantage of its customers. He points out that the statute requiring this approach results in a shifting of risk away from Duke's investors and toward its ratepayers that should result in a lower cost of capital for rate setting purposes. In explaining the impossibility of assessing the

prudence of the decision to incur preconstruction costs, he points out that cost estimates for new nuclear units have been rising at an astonishing rate and have reached some \$6,000 per kW and above, more than doubling the estimates of five years ago. He described his own experience in dealing with the ratemaking consequences of some of the problem plants of the 1970s and 1980s. In discussing this history, he explained why the changes to the NRC licensing process are not likely to produce large savings and why they may in some respects be counterproductive. Finally, he discussed the possible impact of nuclear power in the context of climate change. He showed that – while nuclear power at a reasonable price and under reasonable conditions could be helpful - nuclear power under the conditions presented in this proceeding is unlikely to make a positive impact. Tr., May 7, 2008, pp. 219-220.

South Carolina's new statutory framework confers an extraordinary benefit on Duke because it allows the decision to construct the proposed nuclear unit to be deemed prudent based on a review conducted long before events point to anything that has actually gone wrong. On the basis of this necessarily incomplete review, Duke will be well on the road to being able to recover a very substantial portion of its costs before the plant ever operates. No other type of large industrial facility enjoys this capability. Tr., May 7, 2008, p. 220.

Just as a person may pass a physical one month and die the next, so a transaction may pass a review based on the level of information provided in this proceeding only to be revealed as imprudent by later rate impacts indicative of significant infirmities. Nuclear construction history is replete with imprudent decisions and actions that could not have been detected by regulators until they produced real

consequences. The decision by Maine utilities to increase their share in the Seabrook units in the late 1970s was one such decision with which he had first hand experience. The process by which a design error led to the waste of hundreds of millions of dollars at the Diablo Canyon Station in California was another. The failures in the quality assurance program at the Zimmer plant in Ohio that eventually led to the cancellation of a plant that had been considered (wrongly as it turned out) to be 99% complete was another case in which the source of the waste could not have been discovered by a state PUC for several years after it had occurred. A prudence review uninformed by the occurrence of substantial rate impacts is an impossible task. Thousands of decisions would have to be reviewed and predictions of consequences would have to be made. Consider that Enron or Global Crossing or Bear Stearns were believed to be sound investments a few months before their collapse proved to the contrary, or imagine that the Pennsylvania PUC had been asked to assess prudence at Three Mile Island Unit 2 in early March, 1979, just before the accident. No before-the-fact reviews would have discovered the many acts of imprudence that caused the accident a few weeks later. Yet once this Commission determines prudence in this proceeding it may be foreclosed from revisiting that determination even if later events reveal that it was questionable. Tr., May 7, 2008, pp. 222-223.

One of the statutory requirements for a prudence determination is that the power be needed. But need is a function of cost. Every state has a very large need for power costing one cent per kilowatt hour and little or no need for power costing twenty-five cents per kWh. The commission needs to know the price per kWh to know where on this scale the William States Lee Station's output will fall and what its impact on

South Carolina rates will be. Recent cost figures for new nuclear plants provided in Florida show the potential for nuclear construction to raise rates by 50 percent or more in that state. To find that such projects are needed, any commission needs to be able to say that cheaper or otherwise preferable resources are unlikely to be available. Tr., May 7, 2008, p. 225.

Duke's projected 90% annual capacity factor for the proposed Le station is extremely optimistic. Nuclear plants in the U.S. today don't have lifetime capacity factors of 90% even with the commendable improvements of the last decade. Indeed, most new units in other countries tend to have significantly lower capacity factors in their first few years of operation, when they are being broken in. Prudence requires assuming something similar with respect to any new design. If the capacity factor of the first few years is significantly below 90%, it will be hard to attain a 90% lifetime average because downtime for refueling and maintenance remains unavoidable even for the best units. Tr., May 7, 2008, p. 232.

Bradford recommends the following measures be adopted by the Commission: First, the Commission should not find any decisions prudent until it is presented with a credible cost estimate and an estimate of rate impacts as well as a clear comparison among the alternatives.

Second, the Commission should confine the scope of its prudence determination as narrowly as possible under the statute. In particular, the Commission should not accept the proposition that payments to secure the long lead time items are "preconstruction" costs. Such payments are very much part of the construction process. Their prudence

requires detailed separate review of evidence not presented in this proceeding in the event that they give rise to excessive costs.

Third, the Commission should require that Duke use a competitive power procurement process to screen possible power supply resources. Such competitive power procurement was the source of the resources that successfully replaced the Seabrook power in Maine. Indeed, when utilities in Maine sought a determination of the prudence of a major transmission project to buy power from Hydro-Quebec, the Maine Commission required that they test the purchase decision against the results of competitive solicitation for equivalent power. The solicitation produced ample power at lower prices, and the transmission line was never built.

Fourth, In the present environment of rapidly escalating costs, it is particularly urgent to protect customers from open-ended commitments with potentially ruinous economic impacts. To this end, the Commission should limit the total cost of the project that it would consider to be a prudent commitment at this time. Costs above that ceiling would not be recoverable from the customers. Such a ceiling might be revisited once or twice as the project moves forward, but the Commission should be clear that it is not subject to infinite upward revision.

Fifth, because of the strong likelihood that energy efficiency is available at lower cost than the proposed nuclear station, the Commission should require a showing that programs are in place to capture all cost-effective energy efficiency before it accepts as prudent any decision to build a nuclear unit.

Sixth, the Commission should indicate in any decision on prudence under the new South Carolina statute that it recognizes the reduced risk that will flow from the decision

and intends to adjust the allowed return on equity accordingly. Tr., May 7, 2008, pp. 235-237. The Commission finds these recommendations just and reasonable and amply supported by the evidence of record.

### CONCLUSIONS OF LAW

The "Base Load Review Act," S.C Code Sections 58-33-210, et seq., requires Duke to submit an application and supporting evidence with the following mandatory elements:

In a project development application, the utility shall:

(1) describe the plant being considered and shall designate:

(a) the anticipated generation capacity (or range of capacity) of the plant; and

(b) the projected annual capacity factors or range of factors of the plant;

(2) provide information establishing the need for the generation capacity represented by the potential plant and the need for generation assets with the indicative annual capacity factors of the potential plant;

(3) provide information establishing the reasonableness and prudence of the potential fuel sources and potential generation types that the utility is considering for the plant; and

(4) provide such other information as may be required to establish that the decision to incur preconstruction costs related to the potential nuclear plant is prudent considering the information known to the utility at the time and considering the other alternatives available to the utility for supplying its generation needs.

S.C Code Section 58-33-225C. We conclude that Duke's application and evidentiary submission is inadequate and insufficient in its failure to demonstrate a credible annual capacity factor for the proposed plant; in its failure to credibly demonstrate the need for the generation assets represented by the proposed plant; in its failure to establish the



reasonableness and prudence of the potential fuel sources and potential generation types that the utility is considering for the plant; and in its failure to establish that the decision to incur preconstruction costs related to the potential nuclear plant is prudent considering the information known to the utility at the time and considering the other alternatives available to the utility for supplying its generation needs.

Duke's projected 90% capacity factor for the proposed plant is overly optimistic. It fails to recognize the historic experience of reduced reliability during the early shake-down years of operation, the likely reduced early reliability to be experienced from a new an untested reactor design; and the likely reduced reliability from reduced water availability due to increased drought frequency and duration associated with climate change.

Duke has failed to credibly demonstrate the need for the generation capacity represented by the proposed 2200 MW, 2 unit nuclear plant. Duke's glowing assumption of an annual rate of growth in demand more than twice the recent historic rate is unpersuasive and at odds with the explanation that the recent experience of declining textile sector demand is unlikely to rebound. Current depressed economic conditions simply corroborate the evidence that Duke's demand forecast is excessive, unrealistic and unsupportive of the need for this large new generation capacity.

Duke has failed to offer any reliable evidence demonstrating that its choice of a base load nuclear generating plant- let alone the specific Westinghouse AP 1000 design type proposed- is reasonable and prudent in light of available alternatives. Duke's application and prefiled testimony are wholly devoid of any demonstration of the cost-effectiveness of the proposed plant as compared to the alternatives including energy

efficiency investments and renewable alternative generation sources. This demonstration is the core requirement of the statute. On this measure Duke's application and evidentiary submissions are demonstrably inadequate.

The "Base Load Review Act," imposes the following standards on the utility and this Commission for the grant of relief:

The commission shall issue a project development order affirming the prudence of the utility's decision to incur preconstruction costs for the nuclear plant specified in the application if the utility demonstrates by a preponderance of evidence that the decision to incur preconstruction costs for the plant is prudent. In issuing its project development order, the commission may not rule on the prudence or recoverability of specific items of cost, but shall rule instead on the prudence of the decision to incur preconstruction costs for the nuclear plant described in Section 58-33-225(C)(1).

S.C Code Section 58-33-225(D). Thus, the burden is upon Duke to demonstrate the elements of the statutory standards by a preponderance of evidence. Since the Commission is expressly precluded in this proceeding from ruling on the prudence of "specific items of cost-" which are to be considered later in a subsequent cost-recovery proceeding pursuant to S.C Code Section 58-33-225(E) and (F)- the focus here is necessarily on the nuclear plant choice itself, "considering the other alternatives available to the utility for supplying its generation needs," S.C Code Section 58-33-225C4, among the other factors required by the statute in the utility application. Duke has failed to meet this burden of proof; therefore its application must be denied.

Implicitly Duke itself admits its inability to demonstrate the prudence of a decision to construct the proposed Lee nuclear station. It has repeatedly acknowledged its own uncertainty about the decision to commit to the project, expressly stating that it has not

yet made the final decision to build the plant. Further, it couches its current position as simply seeking to "keep the nuclear option open" through this authorization to incur preconstruction costs. Duke, further, acknowledges the contingencies still bearing on a future decision to proceed: the ongoing contract negotiation with the prospective vendor and related current cost uncertainty, the very likely further significant escalation in nuclear plant construction costs, the expected new Integrated Resource Plan ("IRP") which will refine and likely alter the projected company demand forecast and cost projections for new generating plants and energy supply alternatives including efficiency and renewables; and the formal Duke management authorization to proceed. Given such admitted contingencies and uncertainties of its own, it follows that Duke has not yet shouldered its statutory burden of proof to the Commission of the prudence of building this plant. It is simply not enough to say that- on such thin and uncertain evidence- this Commission should make the statutory prudence determination with all its weighty consequences for ratepayers just to keep the nuclear option open for Duke.

Duke, of course, is free to make a later application under the statute when and if it is capable of submitting the required complete application and shouldering the required evidentiary burden of proof. If, as it suggests, contract negotiations bear fruit and a firm contract cost for plant construction becomes available by year's end, a more complete application may then be possible. Moreover, Duke has already incurred some \$70 million in preconstruction costs toward the Lee station without the necessity of obtaining prior Commission approval. In effect Duke has invested company resources to this end in the expectation that such costs will later be recoverable from ratepayers; and it remains free to invest more of its own funds on that same basis.

In the alternative, if this Commission were to approve in any part Duke's application, we conclude that the following measures are required:

First, the Commission can not find any new plant decisions prudent until it is presented with a credible cost estimate for such plant and an estimate of rate impacts as well as a clear comparison among the alternatives.

Second, the Commission will confine the scope of its prudence determination as narrowly as possible under the statute. In particular, the Commission will not accept the proposition that payments to secure the long lead time items are "preconstruction" costs. Such payments are very much part of the construction process. Their prudence requires detailed separate review of evidence not presented in this proceeding in the event that they give rise to excessive costs.

Third, the Commission will require that Duke use a competitive power procurement process to screen possible power supply resources.

Fourth, in the present environment of rapidly escalating costs, it is particularly urgent to protect customers from open-ended commitments with potentially ruinous economic impacts. To this end, the Commission will limit the total cost of the project that it would consider to be a prudent commitment at this time. Costs above that ceiling would not be recoverable from the customers. Such a ceiling might be revisited once or twice as the project moves forward, but the Commission will be clear that it is not subject to infinite upward revision. In addition, Duke will be required to publicly report to the Commission on a quarterly basis all preconstruction cost incurred during the preceding period.

Fifth, because of the strong likelihood that energy efficiency is available at lower cost than the proposed nuclear station, the Commission will require a showing that programs

are in place to capture all cost-effective energy efficiency before it accepts as prudent any decision to build a nuclear unit.

Sixth, the Commission will indicate in any decision on prudence under the new South Carolina statute that it recognizes the reduced risk to Duke that will flow from the decision and will adjust the allowed return on equity accordingly.

This Order shall remain in full force and effect until further order of the Commission.

BY ORDER OF THE COMMISSION:

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G. O'Neal Hamilton, Chairman

ATTEST:

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C. Robert Moseley, Vice Chairman

(SEAL)

BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA  
DOCKET NO. 2007-440-E

In the Matter of	)	
	)	
Application of Duke Energy Carolinas, LLC	)	<b>Certificate of Service</b>
for Approval of Decision to Incur Nuclear	)	
Generation Pre-Construction Costs	)	
	)	

I hereby certify that on this date I served the above Proposed Order of Friends of the Earth Denying the Application of Duke Energy Carolinas, LLC by placing copies of same in the United States Mail, first-class postage prepaid, addressed to:

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VP Legal, State Regulation  
Duke Energy Carolinas, LLC  
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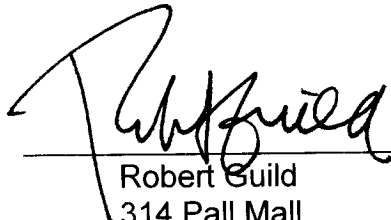
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May 23, 2008